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Increasing HIV prevalence in STD clinic attendees in Delhi, India: 6 year (1995–2000) hospital based study results

EDITOR,—The association between the occurrence of HIV infection and the presence of other STDs has been strongly established. STDs act as important co-factors that promote HIV transmission. The trend of HIV infection in STD clinic attendees, one of the high risk groups, may reflect the trends of HIV epidemic in the community. To estimate the frequency of HIV infection among various STD patients over a period of 6 years from January 1995 to December 2000 and to observe the interrelation between HIV infection and different other STDs, we analysed the HIV status of 1504 STD clinic attendees (M:F ratio 1:0.1, average age of 25.2 years) in Dr RML Hospital, a centrally located major tertiary care centre in Delhi. The breakdown in the number of STD attendees tested for HIV voluntarily out of total STD attendees was as follows: 180 out of 407 (44%) in 1995, 261 out of 513 (51%) in 1996, 245 out of 414 (59%), in 1997, 280 out of 363 (77%) in 1998, 235 out of 368 (63%) in 1999, and 296 out of 442 (67%) in 2000. This variation of percentage from year to year is due to the voluntary nature of testing. HIV testing was done with one of the ELISA/rapid/simple tests. Any reactive serum sample was retested using a different assay. A sample that was positive in both the tests was considered HIV positive. The other STDs were diagnosed clinically and using appropriate laboratory tests.

Out of 1504 STD patients screened for HIV infection, 42 (2.8%) were found to be seropositive (40 males out of 1354 and two females out of 150). Annual breakdown revealed a slow but gradual increase in HIV prevalence (1.7% in 1995, 2.2% in 1996, 2.1% in 1997, 2.5% in 1998, 2.7% in 1999, and 3.4% in 2000). The cumulative prevalence of HIV seropositivity in different STDs is shown in table 1.

HIV positivity was observed in 4.5% patients with GUDs, in contrast with only 1.7% HIV positivity among non-ulcerative

STD patients, which is statistically significant ($p > 0.002$). All but one male HIV positive patients gave a history of sexual contact with at least one commercial sexual worker. Out of two HIV positive women, one possibly was infected by her husband and the other from her regular sexual partner; both were not pregnant at the time of HIV testing. Five (19%) HIV seropositive patients had more than one STD.

HIV sentinel surveillance in India shows the HIV epidemic at different stages of evolution in different states of India.¹ Six out of 32 states have HIV prevalence of more than 1% in antenatal clinics (ANC) and are classified as high prevalence states including Maharashtra and Tamil Nadu. In seven other states the ANC rates are less than 1% but prevalence among STD clinic attendees is more than 5% classified as moderate prevalence. The remaining 19 states including Delhi are low prevalence states because HIV prevalence among STD attendees is less than 5%.^{1,2} The HIV sentinel surveillance data of Delhi show 1.6% and 3.2% HIV infection in 1998 and 2000, respectively, among STD attendees from four other major STD clinics in Delhi, where anonymous HIV testing was done from VDRL blood samples.³ These data as well as ours are comparable and support the belief that Delhi is still in a low level epidemic category.

From the experience of the Mwanza trial in Tanzania and the Rakai trial in Uganda, it is speculated that the effect of STD control on HIV transmission may decrease with the maturation of the HIV epidemic.⁴ Therefore, it is high time to extend vigorous intervention programmes in all high risk groups as well as the general population of this city which is still in the early epidemic phase to ensure this cost effective opportunity is not missed.

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Table 1 Frequency of HIV seropositivity in different sexually transmitted diseases

Type of STDs	No of patients having same STD	No of patients found HIV seropositive	Seropositivity rate (%)
Group I, ulcerated STDs			
Syphilis	222	10	4.5
Chancroid	200	10	5.0
Genital herpes	162	7	4.3
Donovanosis	4	0	0
Lymphogranuloma venereum	17	0	0
All ulcerative STDs	605*	27	4.5
Group II, non-ulcerative STDs			
Non-gonococcal urethritis	102	2	2
Condylomata acuminata	291	7	2.4
Gonococcal urethritis	191	3	1.6
Vaginosis	77	1	0.5
Balanoposthitis	226	2	0.9
All non-ulcerative STDs	899*	15	1.7
All STDs	1504*	42	2.8

*The discrepancy in total number of patients in both groups is due to the presence of more than one STD in some patients.

- 2 *Country scenario 1997–98*. Delhi: National AIDS Control Organisation. Ministry of Health and Family Welfare, Government of India, 1998.
- 3 *HIV surveillance data, 2000–2001*. Delhi: National AIDS Control Organisation, Ministry of Health and Family Welfare, Government of India, 2001 (unpublished data).
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Genital piercing and sexually transmitted infections

EDITOR,—An interesting observation was noted about patients with genital piercing in our clinic. We looked at 12 case notes of patients retrospectively who attended our clinic for sexual health screening in the past 12 months. There were seven males and five females in the age group 22–36. Looking at the results of their screening tests for STIs, none of the males had chlamydia. Interestingly, four out of six female contacts of these males, who also attended for screening, were found to be positive for chlamydia detected by enzyme immunoassay (EIA). None had gonorrhoea. It was also noted that none of these female contacts had their genitals pierced. Of the five females who had their genitals pierced, three had chlamydia, one had genital warts, and one was found to have bacterial vaginosis. Their corresponding male contacts again with no genital piercing also had chlamydia and genital warts. Two other contacts did not attend but were said to be asymptomatic. The method of genital piercing in males was with the so called Prince Albert ring (famously worn by Prince Albert) where the metal ring is inserted through the external urethra and glans penis (fig 1). In the females, however the urethra is not involved and the piercing is mostly through the clitoris or vulva. We wondered whether this involvement of the urethra in males was significant. It appeared that there was a protective effect in males despite having chlamydia positive female sexual partners. Possible mechanisms could be slow release of metal ions having an antibacterial effect, the presence of epithelial metaplasia or a chronic inflammatory process contributing to a local immune response. We do acknowledge that this is a very small cohort and these findings may be by chance or can be explained by the low sensitivity of EIA.

Genital piercing is becoming more fashionable in the Western world and is performed to enhance sexual pleasure and also for cosmetic effect. It was traditionally practised in the tribal population of India and Africa, mostly for ritual and cultural reasons. Metal or ivory studs or rings or bars are commonly used. The metals can be made of steel or various other alloys containing iron, copper, zinc, and



Figure 1 A Prince Albert ring inserted through the external urethra and glans penis.

even gold or silver. Currently, there are very few data in the literature about STIs and genital piercing but it has been postulated that there can be an increase in the risk of transmission of blood borne viruses as well as other STIs because of damage to condoms caused by these objects. A recent study¹ also did not find any association between body piercing and genital infections in general; however, we wondered whether genital piercing should be included in the KC 60 data collection. We would welcome observations from the readers of *STI* on this subject.

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1 Willmott FE. Body piercing: lifestyle indicator or fashion accessory? *Int J STD AIDS* 2001;12:358-60.

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Safer sex in HIV infected patients in London: practices and risks

EDITOR,—Recent figures from the Public Health Laboratory Service (PHLS) report¹ have shown the largest number ever of new cases of HIV infection (2868 cases) during 2000 in the United Kingdom. The majority of HIV infected individuals attending clinics for their treatment and care will have been counselled and strongly advised to practise safer sex. Specific risks of unsafe sex will be summarised, including the risk of transmission of HIV to their partners, as well as their own risk of acquiring new sexually transmitted infections, and the spectre of multidrug resistant HIV variants.

The overall effect of such safer sex messages were called into question by Dodds *et al*² who recently reported evidence of an increasing incidence of high risk sexual behaviour among homosexual men in London. The accompanying editorial by Grulich³ called for improved data on risk behaviours, specifically in HIV infected individuals. We can present data on this from a questionnaire survey of patients attending the largest HIV outpatient centre in London.

The questionnaire was distributed to 500 consecutive individuals attending the Kobler HIV outpatient clinic at the Chelsea and Westminster Hospital during spring 2000. The confidential questionnaire could be completed anonymously if the patient wished. Data were gathered concerning the individuals' sexual behaviour over the past year in terms of number of sexual partners and episodes of unprotected sex. Further data were collected on whether individuals had sexually transmitted infections (STIs) diagnosed in the past year and/or attended for sexual health screening (table 1). We also asked them how they had acquired HIV infection.

A total of 494 legible questionnaires were suitable for analysis. Anonymous questionnaires were received from 240 respondents, whereas 254 (50.8%) disclosed their identity, and 35 (7%) were female. Although 317 patients (64%) reported engaging in only protected sex in the previous 12 months, 173 (35%) individuals had unprotected penetrative sex in the past year. This figure for HIV infected individuals has a remarkable concordance with the data for unprotected

intercourse in a sample of homosexual men which reported a prevalence of 38%.² On further analysis of this group, it was revealed that a substantially higher proportion, 93 (54%), had unprotected sex with more than five partners, of which 40% had more than 10 sexual partners in the past 12 months.

Only 252 patients had a sexual health check up in the past year. There was a significant association between having a check up and reporting having unprotected sex. However, of those who had unprotected penetrative sex in the past year, 67 (39%) did not have a sexual health screen. A sexually transmitted infection had been diagnosed in 41% of respondents in the past year, which was significantly⁴ associated with their increasing numbers of sexual partners.

We believe that major efforts to encourage sexual health check ups must be targeted to the key population of HIV infected individuals. The majority (76.2%) of our patients who had a sexual health check up in the last year, did so at the GU medicine clinic in the same building, contrary to the popular belief that HIV patients do not use local services for sexual health check ups.

Oral sex causing HIV transmission is biologically plausible though it is considered a less risky activity compared with unprotected vaginal and anal intercourse⁵. However, the frequency of its occurrence may serve to increase its relative contribution to overall HIV transmission. Inflammation or ulceration of the oral mucosa due to mouth ulcers, gingivitis, periodontal disease, pharyngitis, bleeding gums after tooth brushing or flossing could potentially lead to the increased risk of HIV transmission.

Six per cent of our studied population believed they acquired HIV infection through unprotected oral intercourse only. On reviewing the notes of the identifiable patients we concluded that five out of these 15 patients had no other risk factor other than unprotected oral sex recorded at any time during their counselling or management records, which can account for their HIV transmission. The remaining 10 patients' notes did not have enough evidence to support their claim that they acquired HIV disease through oral sex only. Three out of five of these patients had never engaged in anal sex and the remaining two always used protection.

Following this observation we have further identified six patients who have probably acquired HIV through unprotected oral sex, and we can summarise data from all 11 patients. They were all homosexual men. Eight out of 11 never practised anal sex and the remaining three always used protection. Five of them were living with long term HIV positive partners and were fully aware of

safer sex issues. However, all of the five considered unprotected oral sex as a safer activity. Six out of 11 were reported to have recurrent infections of the mouth; two had pharyngeal gonorrhoea, one had herpes simplex stomatitis, two had idiopathic ulcerative stomatitis, and the remaining one had his tongue pierced 10 weeks before his seroconversion. Although oral sex is a lower risk activity for HIV transmission, in compromising situations where the mucosal barrier of the mouth is not intact, it can play a larger part in HIV transmission and can possibly be the sole cause of transmission.

Despite the recent EAGA report,⁶ while such uncertainties about the contribution of oral sex to new HIV transmission exist, the delivery of clear safer sex messages to this and other groups will remain difficult to implement.

Our department is now developing a fast track service to enable HIV infected individuals to more easily combine sexual health screening with their HIV outpatient appointment. Efforts by both statutory services and advocacy and support organisations for HIV infected people need to be coordinated to promote these initiatives.

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BOOK REVIEWS

Sexually Transmitted Diseases, Vaccines, Prevention and Control. Ed Stanberry LR, Bernstein DI. Pp 457; \$119.95. New York: Academic Press, 2000. ISBN 0-12-663330-4.

It has become increasingly clear that STIs cannot be controlled simply by diagnosis and treatment of the relevant pathogens alone. This new volume on STI prevention is especially relevant as we struggle to provide access for those already infected with sexually transmitted organisms. My first thought when I looked at this book was influenced by the cover illustration of a herpes simplex virion. It looked like another worthy tome

Table 1 Reported incidence of sexually transmitted infections (STI) over past year by respondents

STI	Diagnosed with an STI in the past 12 months (n = 102)
Gonorrhoea	36 (35.3)
Chlamydia/NSU	22 (21.6)
Syphilis	4 (3.9)
Herpes (first episode)	20 (19.6)
Warts (first episode)	29 (28.4)
Others	13 (12.7)
Combination of STIs	22 (21.6)
Gonorrhoea + chlamydia/NSU	8 (3.8)